

ABSTRACT OF THE DISCLOSURE

An image pickup apparatus comprising an array of unit cells, vertical signal lines, and a control circuit. The unit cells are arranged in rows and columns. Each unit cell has a light-receiving device for receiving light and generating an electric charge corresponding to the light, a charge-accumulating section for accumulating the electric charge generated by the light-receiving device, a transfer device for transferring the electric charge from the light-receiving device to the charge-accumulating section, and a charge-limiting device for limiting the electric charge accumulated in the charge-accumulating section. The vertical signal lines extend along the columns of unit cells, respectively, each for receiving an electric data item corresponding to the electric charge accumulated in the charge-accumulating section of any unit cell of the associated column. The control circuit controls each of the unit cells, causing the charge-limiting device to limit the charge generated by the light-receiving device during a first period and transferred to the charge-accumulating section through the transfer device. The charge generated by the light-receiving device during a second period following the first period and transferred to the charge-accumulating section through the transfer device is added to the electric charge accumulated in the charge-accumulating section.